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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/499,369	02/07/2000	Toshitsugu Wakabayashi	1190-0437P	1167

7590 04/08/2003

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EXAMINER

TRAN, TRANG U

ART UNIT	PAPER NUMBER
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2614

DATE MAILED: 04/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/499,369

Applicant(s)

WAKABAYASHI, TOSHITSUGU

Examiner

Trang U. Tran

Art Unit

2614

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 December 2002 and 29 January 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6, 10-15 and 17-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 10-15 and 17-19 is/are rejected.
- 7) ☒ Claim(s) 7-9 and 16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed Dec. 04, 2002 have been fully considered but they are not persuasive.

In re pages 5-6, applicant argues that, with respect to claim 1 rejected under 35 U.S.C. 102(e) as being anticipated by Murayama et al, the timing generator 4 in Murayama reference merely generates the timing signal which varies the timing for sampling the image signal periodically and; thus, does not vary the waveform characteristic of the image signal as required by claim 1.

In response, the examiner respectfully disagrees. Murayama et al discloses in col. 5, lines 52-56 that "The PLL circuit 41 operates so that the phase of the video timing detected by the RGB signal processing circuit 10 is made coincident with the phase of the pulse signal obtained by frequency-dividing the oscillation output of the VCR 44 in the divider 45" and in col. 6, lines 1-5 that "In this case, if the control input voltage is modulated by the pulse waveform every line or every field **to periodically vary the phase of pictures to the pixels**, a spatial frequency filter in which the variation of the phase corresponds to a cut-off frequency is achieved". From the above passages, it is clear that the phases of the fields of the video signal are periodically varied with respect to the pixels. Changing the phases of the video signal does indeed change the waveform characteristic of the video signal because the waveform of the video signal has been shifted with respect to time. Accordingly, varying the time of the output of the

Art Unit: 2614

PLL of Murayama anticipated the now claimed varying the waveform characteristic of the image signal.

In re page 6, applicant states that claims 2-4, 10-14, and 17-19 are allowable for the same reason as discussed with respect to claim 1 above.

In response, as discussed above with respect to claim 1, Murayama does indeed disclose the claimed varying the waveform characteristic of the image signal.

In re pages 6-7, applicant states that claims 5-6 and 15, which are rejected under 35 U.S.C. Sec. 103(a) as being unpatentable over Murayama in view of Nishio Kenji, are allowable for the same reason as discussed above with respect to claim 1.

In response, as discussed above with respect to claim 1, Murayama does indeed disclose the claimed varying the waveform characteristic of the image signal.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-4, 10-14, and 17-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Murayama et al. (US Patent No. 6,346,936).

In considering claim 1, Murayama et al. discloses all the claimed subject matter, note 1) the claimed an image signal processing circuit receiving an image signal and

Art Unit: 2614

processing the image signal for display as an image is met by the RGB signal processing circuit (Fig. 1, col. 1, lines 20-26), 2) the claimed an image display unit receiving the image signal processed by the image signal processing circuit, and displaying the processed image signal as an image on a screen is met by the LCD panel 30 of the LCD display (Fig. 1, col. 1, lines 31-37), and 3) the claimed a control circuit varying a waveform characteristic of the image signal in a periodic manner is met by the timing generator 4 which comprises the PLL circuit 41, the timing generating unit 46 and the phase shifter 47 as show in Fig. 5 (col. 5, line 36 to col. 6, line 12).

In considering claim 2, the claimed wherein the image is divided into spatial lines and temporal frames, and the control circuit alter said waveform characteristic once per spatial line in each temporal frame is met by the timing generator 4 which comprises the PLL circuit 41, the timing generating unit 46 and the phase shifter 47 as show in Fig. 5 (col. 5, line 36 to col. 6, line 12).

In considering claim 3, the claimed wherein the control circuit also alters said waveform characteristic once per said temporal frame in each said spatial line is met by the timing generator 4 which comprises the PLL circuit 41, the timing generating unit 46 and the phase shifter 47 as show in Fig. 5 (col. 5, line 36 to col. 6, line 12).

In considering claim 4, the claimed wherein the control circuit comprises a timing circuit receiving a first synchronizing signal indicating said spatial lines and a second synchronizing indicating said temporal frames, and generating a timing signal by dividing a frequency of the first synchronizing signal, toggling the timing signal once per said spatial line and reversing a phase of the timing signal once per said temporal

Art Unit: 2614

frame, said waveform characteristic being controlled according to the timing signal is met by the timing generator 4 which comprises the PLL circuit 41, the timing generating unit 46 and the phase shifter 47 as show in Fig. 5 (col. 5, line 36 to col. 6, line 12).

In considering claim 10, the claimed further comprising a control unit that determines a resolution of the image signal and activates the control circuit, depending on the resolution is met by the control input which is input from the external of the timing generator 4 (col. 5, lines 58-67).

In considering claim 11, the claimed further comprising an external control for activating the control circuit if the displayed image includes a moire pattern is met by the control input which is input from the external of the timing generator 4 (col. 5, lines 58-67).

Claims 12-14 are rejected for the same reason as discussed in claims 1-3, respectively.

In considering claim 17, the claimed wherein said step of periodically varying further comprises the step of periodically delaying the image signal is met by the phase shifter 47 (col. 5, lines 60-67).

Claims 18-19 are rejected for the same reason as discussed in claims 10-11, respectively.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

Art Unit: 2614

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 5-6 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murayama et al. (US Patent No. 6,346,936) in view of Nishino Kenji (JP Patent No. 06-12195).

In considering claim 5, Murayama et al. disclose all the limitations of the instant invention, except for providing the claimed wherein the control circuit has a variable inductance element, and varies said waveform characteristic by passing the image signal through the variable inductance element. Nishino Kenji teaches that the level control circuit 35 is amplified while the police box voltage from the police box voltage generating circuit 10 is supplied to the current amplification circuit 37 and transformed into current. Coil L1 which is attached in the color neck of a cathode-ray tube section, and generates vertical alternating field between the output terminal of this current amplification circuit 37, and grounding as show in drawing 5(A) and (B) and the series circuit of L2 (the respectively separate core is looped around) and the series circuit of a resistor 38 are connected (Page 2, lines 45-59). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate A coil L1 and L2 as taught by Nishino Kenji into Murayama et al's system in order to reduce the moiré generated with the color cathode-ray tube which used the shadow mask and the aperture grille.

In considering claim 6, the claimed wherein the variable inductance element comprises a coil having a primary winding and a secondary winding, the image signal

passing through the primary winding, the control circuit alternately opening and closing the secondary winding is met by A coil L1 and L2 (Fig. 5, Page 2, lines 45-59).

Claim 15 is rejected for the same reason as discussed in claim 5.

Allowable Subject Matter

6. Claims 7-9 and 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 7-9 and 16 identify the uniquely distinct features "wherein said waveform characteristic is an amplitude characteristic, and the control circuit comprises: a first amplifier circuit amplifying the image signal with a first gain characteristic; a second amplifier circuit amplifying the image signal with a second gain characteristic differing from the first gain characteristic; and a timing circuit selecting the first amplifier circuit and the second amplifier circuit alternately". None of references of record, either singularly or in combination, fail to anticipate or render the above underlined limitations obvious.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

Art Unit: 2614

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Trang U. Tran** whose telephone number is **(703) 305-0090**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **John W. Miller**, can be reached at **(703) 305-4795**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231


or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

TT TT
April 6, 2003


JOHN MILLER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600